G. F. HELSON.

WRAPPER HOLDER.

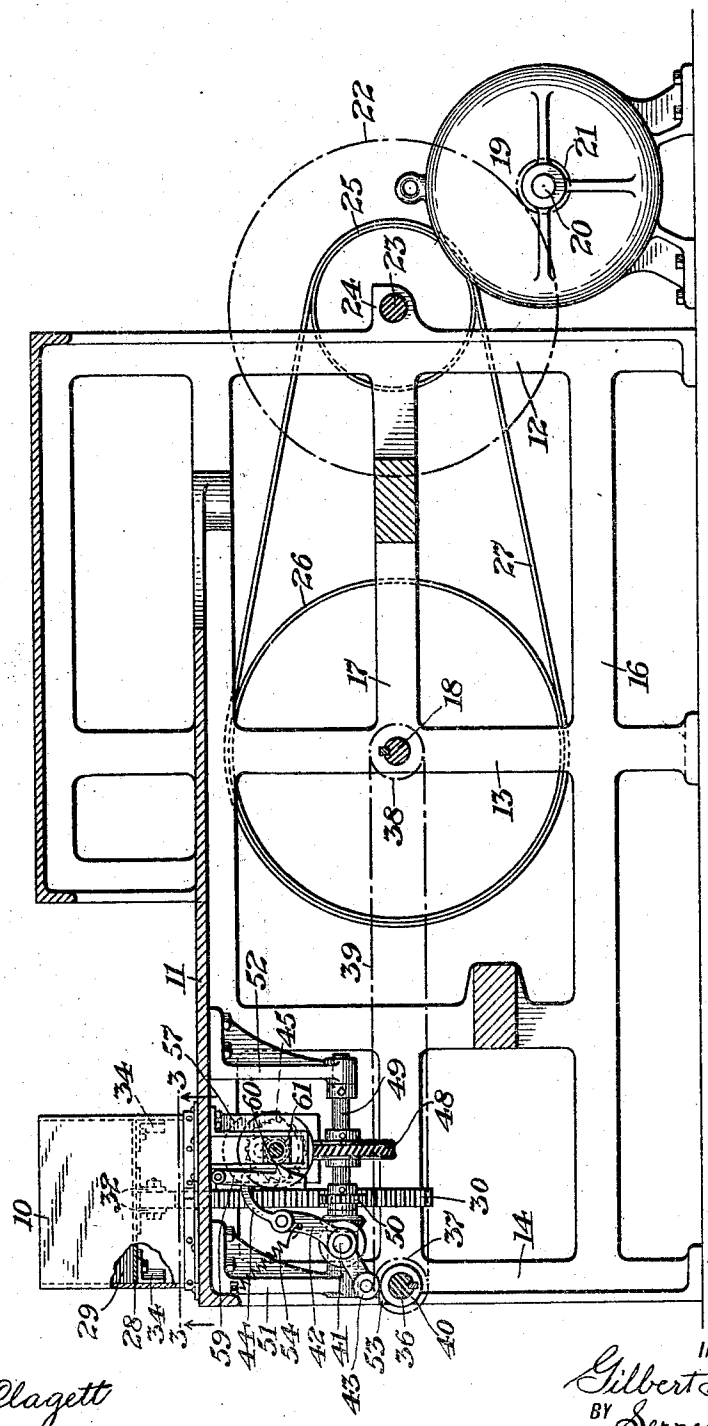
APPLICATION FILED FEB. 11, 1918.

1,271,314.

Patented July 2, 1918.

2 SHEETS—SHEET 1.

Fig. 1



WITNESS

Chas. J. Clagett

INVENTOR

Gilbert F. Helson

BY Serrell & Son

HIS ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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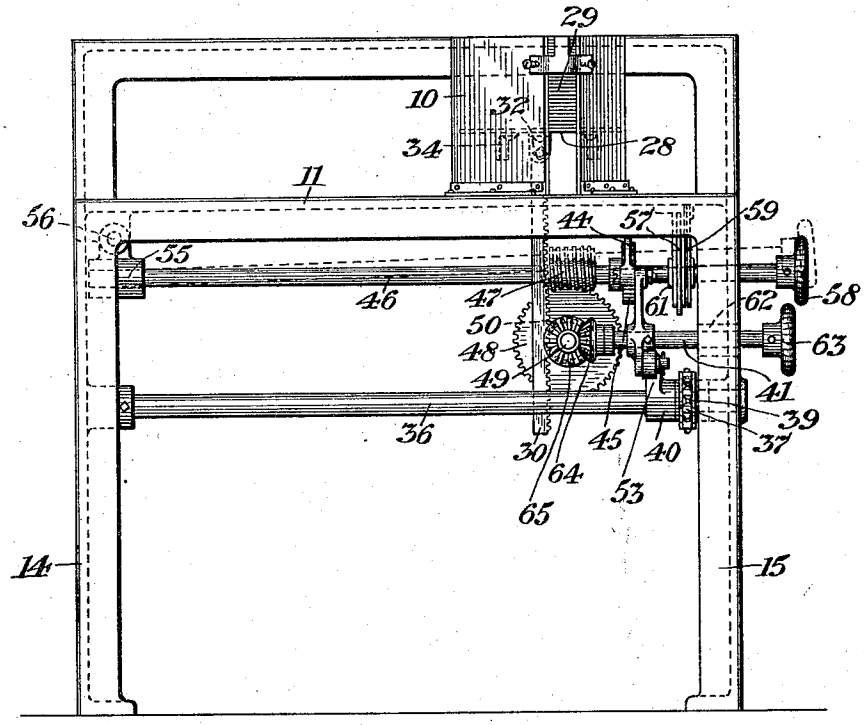
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2 SHEETS—SHEET 2.

Fig. 2



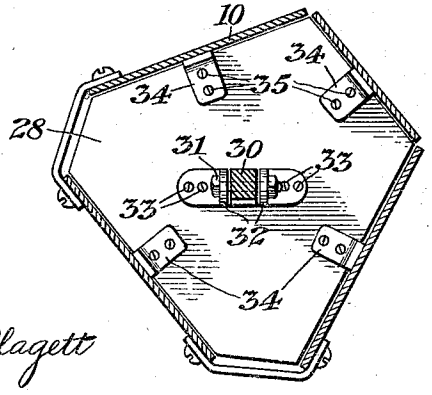


Fig. 3

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UNITED STATES PATENT OFFICE.

GILBERT F. HELSON, OF BAYSIDE, NEW YORK, ASSIGNOR TO E. R. DURKEE & CO., OF ELMHURST, NEW YORK, N. Y., A FIRM.

WRAPPER-HOLDER.

1,271,314. Specification of Letters Patent. **Patented July 2, 1918.**

Original application filed February 28, 1917, Serial No. 151,397. Divided and this application filed February 11, 1918. Serial No. 216,501.

To all whom it may concern:

Be it known that I, GILBERT F. HELSON, a subject of the King of Great Britain, but having declared my intention of becoming a citizen of the United States, formerly of the borough of Richmond, city and State of New York, but now residing at Bayside, in the county of Queens, in the State of New York, have invented an Improvement in Wrapper-Holders, of which the following is a specification.

My invention relates to holders for wrappers for use in wrapping machines, and is a division of my application for patent on wrapping machines filed February 28, 1917, Serial No. 151,397.

The present invention relates particularly to mechanism for elevating the stack of wrappers in the holder.

The details of the invention are hereinafter particularly described.

In the accompanying drawing:

Figure 1, is a side elevation, partly in section, showing my improved wrapper holder and the mechanism for operating the same.

Fig. 2 is a rear end elevation of the same, and

Fig. 3, is an inverted sectional plan view of the wrapper holder taken on the broken line 3—3 of Fig. 1.

Similar reference characters denote like parts throughout the several views.

10, indicates the box or holder for the wrappers, which is seated upon and secured to a bed 11, which is supported by the frame comprising the uprights 12, 13, 14, and 15, and cross beams 16, and 17.

18, denotes the main shaft which is journaled at its respective ends in the cross beams 17, there being like beams at each side of the frame.

19, indicates a motor, upon the shaft 20, of which is secured a gear 21, meshing with a gear 22, fixed to a shaft 23, journaled in bearings in a bracket 24, fixed to the upright 12, in line with the main shaft 18. A pulley 25, is fixed to the shaft 23, at one side of the gear 22.

26, denotes a pulley fixed to the main shaft 18, adjacent one end. 27, indicates the drive belt which passes around the pulleys 25 and 26.

The sides of the box or holder 10, at their lower parts are secured to the top of the bed 11, in any suitable manner. The bottom 28 of the holder is movable vertically within the box or holder and acts as a follower to push the wrappers 29, toward the top of the box in a regulated manner.

A rack-bar 30, is secured at its upper end to the underside of the follower 28, at its center, in any suitable manner. I have shown a bolt 31, passing through lugs 32, secured to the bottom of the follower by screws or rivets 33.

34, indicates spaced angle pieces which are fastened to the bottom of the follower 28, at its edges by screws or rivets 35. These angle pieces project downwardly in line with the edges of the follower and bear against the respective sides on the interior of the box or holder 10, giving the follower a steady and uniform movement within the holder.

The follower may be raised within the wrapper holder either automatically, or by hand operated mechanism.

36, indicates a rear shaft extending transversely of the machine and supported at its ends in suitable bearings on the frame. A sprocket wheel 37, is fixed to this shaft. 38, is a sprocket wheel fixed upon the main shaft 18, and 39, is a sprocket chain connecting the sprocket wheels 37 and 38. 40, is a cam keyed upon the rear shaft 36. 41 is a shaft supported in suitable bearings, and upon which is fulcrumed a curved lever 42, upon the lower end of which is a roller 43, upon which the cam 40 acts.

At the upper end of the lever 42, is pivotally connected a pawl 44 which engages the teeth of a ratchet 45 fixed on a shaft 46, upon which shaft is a worm gear 47 meshing with a gear 48, fixed on a shaft 49, and upon the same shaft is fixed another gear 50, meshing with the rack bar 30. The shaft 49, is journaled in bearings in the hanging brackets 51, and 52, secured to the bed 11.

When the projection 53 on the cam 40 strikes the roller 43, on the lever 42, the lower end of the lever is raised throwing forward its upper end whereby the pawl 44, turns the ratchet 45, the distance of one tooth thereby raising the rack bar 30, the same distance through the action of the intermediate gears, thus pushing up the fol-

lower 28, within the wrapper box forcing the pile of wrappers therein toward the top of the box.

When the projection 53, on the cam 40, passes the roller 43, on the lever 42, the lever is drawn back to its normal position by the contraction of the spiral spring 54, which is connected at one end to said lever and at its other end to the frame of the machine.

The inner end of the shaft 46 is supported in a hanging bearing 55, pivotally connected to the frame at 56, the other end of this shaft passes through a hanging bracket bearing 57, on the bottom of the bed 11, which forms a bearing, an opening therein being slightly elongated vertically. Upon the projecting end of the shaft 46 there is a knob 58, which may be grasped by the hand to raise this end of the shaft thereby throwing the worm 47, out of gear with the gear 48 on the shaft 49.

59, is a latch, the upper end of which is pivotally connected to the bracket frame 57. This latch is provided with a projection 60, which is swung under the bearing block 61 on the shaft 46, to hold said shaft in the raised position. (See broken lines, Fig. 2).

The shaft 41, projects through a bearing 62, in the frame, and is provided on its outer end with a knob 63. A bevel gear 64, is fixed upon this shaft 41, which engages another bevel gear 65, fixed upon the shaft 49, carrying the gear wheel 50, acting upon the rack bar 30.

It will thus be seen that when it is desired to raise the follower 28 by hand, it may be done by turning the knob 63, after the worm 47 has been thrown out of gear by raising the projecting end of the shaft 46, and supporting it in the bracket hanger 57.

The shape of the wrappers may vary for different shaped receptacles, and it is preferable that the wrapper holder be of a shape corresponding with the shape of the wrappers. I have illustrated the wrapper holder of a shape for holding wrappers for receptacles tapering slightly from the bottom to the top, in which case the wrappers are narrower at the end for covering the upper part of a bottle or other receptacle, gradually tapered from one end to the other, but of course it will be understood that the wrapper holder may be of any desired shape, the follower being correspondingly shaped.

I claim as my invention:

1. The combination of a wrapper holder having a vertically movable bottom, a vertical rack secured thereto, a shaft having a lever fulcrumed thereon and provided with a bevel gear on one end and a knob on the other end, a roller pivoted to one end of said lever, a pawl pivoted upon the other end of said lever, a shaft having a cam fixed upon it to contact with said roller upon the lever, means for rotating said shaft, another shaft having fixed to it a worm gear and ratchet wheel with which said pawl engages, a pivoted bearing for one end of said shaft and a vertically slotted bearing for its other end, another shaft provided with a gear meshing with said worm gear, another gear meshing with said rack, and a bevel gear meshing with said bevel gear on the end of the lever shaft, whereby the bottom of the holder may be adjusted independent of the drive mechanism when said worm gear is disengaged by raising its shaft in said slotted bearing and rotating said lever shaft by hand.

2. The combination of a wrapper holder having a vertically movable bottom, a vertical rack secured thereto, a shaft having a lever fulcrumed thereon and provided with a bevel gear on one end and a knob on its other end, a roller pivoted to one end of the lever, a pawl pivoted to the other end of said lever, a shaft having a cam fixed upon it to contact with said roller upon the lever, means for rotating said shaft, another shaft having fixed to it a worm gear and ratchet wheel with which said pawl engages, a pivoted bearing for one end of said shaft and a vertically slotted bearing for its other end whereby said shaft may be raised, another shaft provided with a gear meshing with said worm gear, another gear meshing with said rack and a bevel gear meshing with said bevel gear on the end of the lever shaft, and means for holding the worm gear shaft in a raised position.

Signed by me this 9th day of February, 1918.

GILBERT F. HELSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."